

Environmental Science and Policy

Welcome Class of 2019!

We are so excited to welcome you to the Drake and ENSP community! We hope your transition to Drake has been smooth and you are enjoying your classes thus far. In order to fully immerse yourself in the ENSP program here at Drake there are a few things we recommend you do. In addition to continuing to keep up with our newsletters, we would highly recommend joining our Facebook group (Drake Environmental Science and Policy Program), checking out our webpage (www.drake.edu/ensp), and most importantly, getting to know your advisor and professors. These people will be your greatest resource during your time at Drake. They will help you find research opportunities, learn about things going on at Drake, and assist you in finding other useful information that will allow you to fully take advantage of academic and professional opportunities in and out of the classroom.

What's Inside:

- Spring 2016 Courses
- Professor Spotlight
- Alumni Spotlight
- Research Opportunity Spotlight

Save the Date!

Annual Conference: October 2

The Iowa Environmental Council is holding its annual conference at Drake. Contact Professor Courard-Hauri to claim one of the ten free tickets available.

Forum: October 9

The Iowa Climate Educator's forum is taking place at Des Moines University from 10:00 to 2:30. If you are interested, please contact Professor Courard-Hauri!

Camping Trip: October 9-10

If you are interested in partaking in an overnight camping trip at Yellowbanks Park please email: david-courard-hauri@drake.edu by September 24!

Registration: November

Check out the ENSP and ENSP related classes being offered this spring on page 2!

Course Offerings

The courses listed below are being offered to students during the upcoming spring semester

ENSP 037

Environmental Case Analysis

Courad-Hauri, Levi, Renner | 3 Credits

A team-based learning course designed for ENSP sophomores. Students will develop scientific and policy responses to 3 major case studies, each focused on a problem in a different area of environmental studies. Students will be introduced to interdisciplinary analysis, the use of primary literature in problem-solving, and addressing complexity.

ENSP 041

Principles of Geology

Levi | 4 Credits

Intro to the science of geology, its principles, methods and theories as they are employed in studying planet Earth. The importance of geological knowledge in understanding problems of natural resources, hazards, and land use is emphasized. No prerequisites. Lab required.

ENSP 063

Zoo Biology

Renner | 3 Credits

An overview of the field of zoo biology, with emphases on the role of zoos in conservation, species survival plans, captive management of small populations of exotic animals, and the use of behavioral research and environmental enrichment methods in captive animal welfare. Prerequisite: BIO 013 or instructor permission.

ENSP 135

Global Change: The Science and Policy of Global Warming

Courard-Hauri | 3 Credits

An investigation of anthropogenic global change, using "global warming" as a semester-long case study. Students learn an effective approach to investigating a major environmental issue by first obtaining a strong scientific background in the issue, building mathematical and conceptual models to test scenarios, and finally investigating various policy options. Climate physics, paleoclimatology, biology, uncertainty analysis, economics, and risk assessment will be covered. Prerequisite: College Algebra.

ENSP 168

Dynamic Environmental Modeling

Courard-Hauri | 3 Credits

Dynamic computer models are critical tools in the analysis of time-dependent systems. In this course, we will construct dynamic models, learn to parameterize them even in the face of imperfect data, and discuss generalized patterns exhibited by complex environmental systems, such as overshoot, resilience, oscillations, and chaos. Prerequisite: any college-level math or statistics course.

ENSP 191

Environmental Science and Policy Practicum

Summerville | 3 Credits

A seminar that brings aspects of biology, chemistry, geology and policy formulation to bear on a contemporary environmental topic such as energy, soil conservation, hydrology, climate change, land use planning, sustainability or ecosystem ecology. May involve construction of models, performance of models or empirical tests. Required capstone for ENSP seniors.

SCSR 055

Environmental Communication

4 Credits

This course focuses on the role of communication in shaping distinctions and relations between "culture" and "nature", in representing environments for audiences, and in advocating for or against environmental policies and practices. As well as reflecting on the relationships between all of these arenas- the theory, critique, and practice of environmental communication.

PSY 129

Primate Cognition

Renner | 3 Credits

A detailed study of primate cognition, emphasizing areas such as tool manufacture and use, numerical competence, social learning, theory of mind, and language. Students learn theoretical principles of cognitive psychology and complete applied primate language research project. Prerequisite: PSY 001 or BIO 098.

REL 140

Ecological Ethics

McCrickerd | 3 Credits

Introduces students to the emerging field of environment and ecological ethics and the spectrum of responses to the questions, issues, and dilemmas posed by the contemporary global ecological crisis. We examine fundamental issues such as how human beings should relate to the rest of nature and the historical roots of the ecological crisis.

HIST 193

Urban Environmental History

Mallea | 3 Credits

Study the history of urban environments, the place of the city in American culture, the development of cities and suburbs, and the city's role in regional and global environment issues. With the class, explore urban ecology and the evolution of infrastructure, like sewers, waterworks and transportation networks. Includes a research project.



Professor Spotlight: Peter Levi

We are very excited to welcome Peter Levi as the newest addition to the ENSP Program here at Drake. He is a stream ecologist interested in the interactions between organisms and aquatic ecosystems. He has applied these interests to various research projects related to watershed management, habitat heterogeneity and biodiversity, and the movement and transformations of nutrients across ecosystems.

His primary research focus is the function and biogeochemistry of stream ecosystems, but his most recent work in the Great Lakes involves a broader assessment of nutrient dynamics, from headwater streams to near-shore ecosystems.

Dr. Levi has a passion for scientific research that is equally matched by his passion for teaching and sharing science. Between his bachelor's degree and graduate school, he has spent three years teaching environmental science to students from kindergarten to college. He has continued to stay involved in education and outreach throughout his Ph.D. and post-doctoral positions.

This coming spring semester, Professor Levi will be teaching Principles of Geology and its associated lab, as well as Case Analysis (along with Professors Courard-Hauri and Renner). In the future, he will also teach courses in hydrology, global biogeochemical cycles, and water resources/conservation. He has discussed developing J-term and summer programs to Hawai'i and Iceland, two geological and ecological hot spots where students can experience Earth's dynamism first hand.

Check out what Professor Levi is most excited about as he begins teaching at Drake: "I'm very much looking forward to starting in the ENSP program in January and engaging with students in the classroom, lab, and field. Being at Drake and in Des Moines, we're well situated to study water resources from many perspectives and I'm excited to weave the ecological, social, political, cultural, and economic dimensions of freshwater issues throughout my classes and research."

Education

PhD. Biological Sciences, University of Notre Dame, Notre Dame, IN

Thesis: Responses in stream ecosystem function to salmon-derived nutrients

B.A. Biology, Lawrence University, Appleton, WI

Minors: Environmental Science, International Relations

Experience

Present Post-doctoral fellow, Cooperative Institute for Limnology and Ecosystems Research (CILER)

Post-doctoral research fellow

Alumni Spotlight: Avereë Luhrs

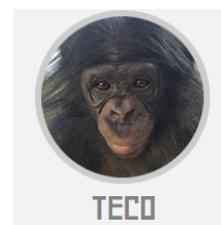
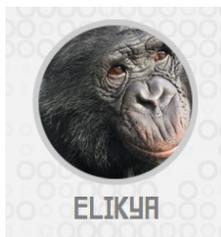
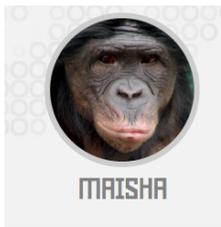


When Avereë started at Drake University in August 2010, she knew she wanted to work with animals. Through the help of Dr. Summerville, she was able to individualize a major in Zoology. During her freshman year, she took a course on primate conservation. She was horrified to learn about the myriad troubles faced by the diverse world of monkeys and apes, and she wanted to do more. She signed up for a concentration in primatology, and after taking classes on primate biology, behavior, and cognition, was offered the chance to spend one month in Rwanda assisting in chimpanzee research.

In summer 2012 she left all she knew in small-town Iowa and flew to the Gishwati forest preserve in rural Rwanda. In Rwanda, Avereë got her first taste of field research: culture shock, exhausting jungle hikes, stunning views, and most memorable of all...an encounter with wild chimpanzees less than a mile away.

By the end of her time at Drake in May 2014, she knew she wanted to continue learning about primates, but she couldn't bring herself to ignore the pressing conservation issues that had been such a huge part of her initial introduction to primatology. She made the huge decision to travel to Oxford, England for a one-year Primate Conservation master's program. Inspired by the work of nocturnal primate researcher, Dr. Anna Nekaris, Avereë decided to change direction from great apes to nocturnal primates. For her master's research, she spent two and half months in Kibale National Park, Uganda conducting an occupancy study on the native pottos and galagos (some of the world's most under-studied primates). She has since been able to present her work at both the Primate Society of Great Britain's spring meeting and recently, the European Federation of Primatology Congress in Rome. Next, she will be carrying on as a PhD student at Brookes focusing again on the abundance, distribution, and conservation of the little-known pottos and angwantibos of West Africa. In the one year since graduation, she has accomplished more than she ever thought possible, and she cannot wait to see what the future has in store.

Research Opportunity Spotlight: Ape Cognition and Conservation Initiative



The ACCI is a research facility located just outside of Des Moines, Iowa, and also happens to be the only research facility in North America to house and study Bonobos. Bonobos are an endangered great ape species endemic to the Congo River Basin in the Democratic Republic of the Congo.

The ACCI is dedicated to the conservation and protection of these great apes, as well as responsible and sustainable research aimed at uncovering the evolutionary origins of human language, cognition, and behavior. They aim to use the knowledge they gain from studies with great apes for the betterment of humanity by increasing public knowledge of our species' origins and our connection with the natural world. With a focus on science, conservation, and civic engagement, ACCI is uniquely positioned to emerge as a leader in a new era in great ape cognition and conservation research.

This past summer, three Drake University students were given the opportunity to volunteer at the ACCI as a part of a practicum Dr. Renner developed and oversees. These students were able to aid in daily tasks such as preparing the apes' diets, making enrichment devices, and keeping the animals' indoor and outdoor enclosures clean. Students were also able to use animal research methods learned through classes at Drake to collect behavioral data using ethograms.

If you are interested in partaking in Dr. Renner's practicum and internship opportunity at the ACCI, contact him regarding the prerequisites needed to get involved at ACCI and receive class credit and valuable field experience through Drake.



